

# Lambretta

## DL/Grand Prix 200

instruction booklet



[scooterhelp.com](http://scooterhelp.com)

Scooters India Limited





# **Lambretta**

## **DL/Grand Prix 200**

[scooterhelp.com](http://scooterhelp.com)

instruction booklet



# welcome to the club

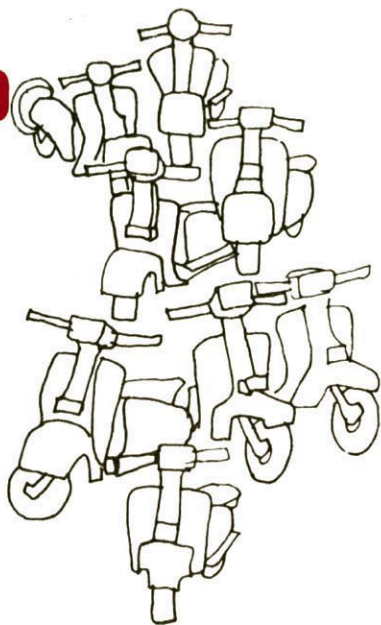
Scooters India Limited wishes you a warm welcome. You picked a winner by getting yourself the **Lambretta** – the scooter designed with your comfort and economy in mind.

We hope this booklet will help you understand your scooter better and enjoy it through years of happy riding.

We have listed a few simple maintenance steps that will ensure trouble-free performance of your **Lambretta**

So, without much ado, ride on!

**Scooters India Limited  
Lucknow**



# your scooter - serialised

Your **Lambretta** is one of an exclusive series. The frame and engine numbers are stamped as indicated in the pictures (Figs. 1 & 2). These numbers are listed in your Warranty Card and should always be quoted, when asking for spare parts.



Fig. 1

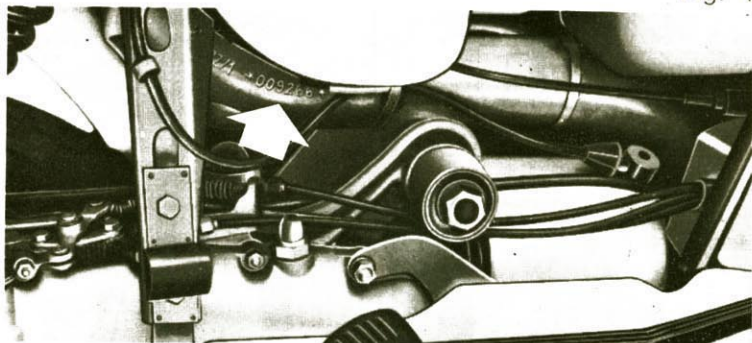
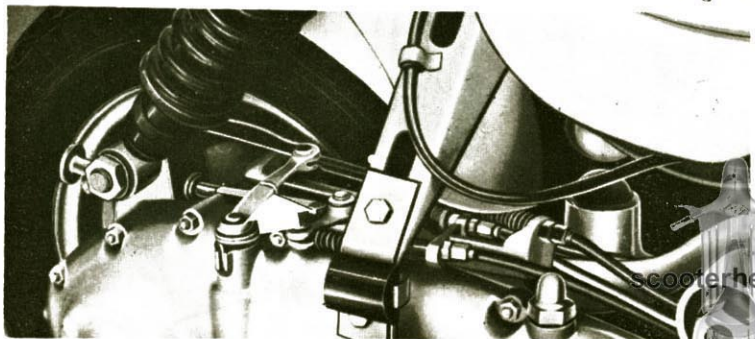


Fig. 2



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# get to know your lambretta

- |   |                      |    |                  |
|---|----------------------|----|------------------|
| 1 | Speedometer          | 9  | Fuel tap control |
| 2 | Clutch control lever | 10 | Choke            |
| 3 | Gear change control  | 11 | Starter pedal    |
| 4 | Head-light switch    | 12 | Rear brake pedal |
| 5 | Throttle             |    |                  |
| 6 | Ignition switch      |    |                  |
| 7 | Steering lock        |    |                  |
| 8 | Front brake lever    |    |                  |

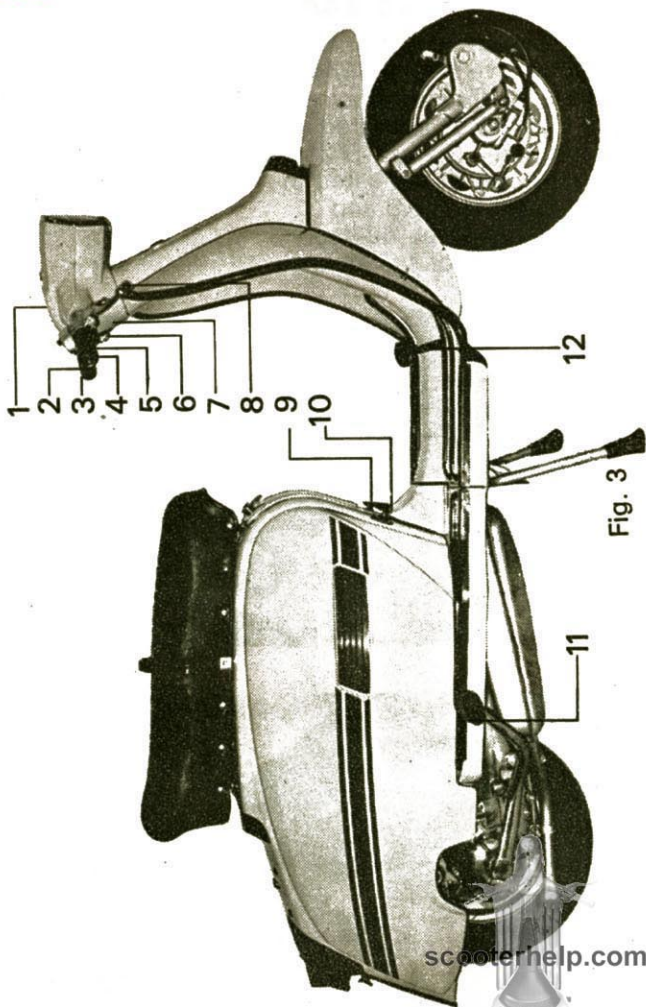


Fig. 3



# vital statistics



Overall length	..	1800 mm
width	..	680 mm
height	..	1012 mm
Wheel base	..	1292 mm
Weight (without Fuel)	..	115 kg
Fuel tank capacity	..	8.10 lit
Reserve	..	0.75 lit
Maximum speed	..	110.8 km/hr.
Fuel consumption (CUNA Specification)	..	25.0 km/lit.

## Engine

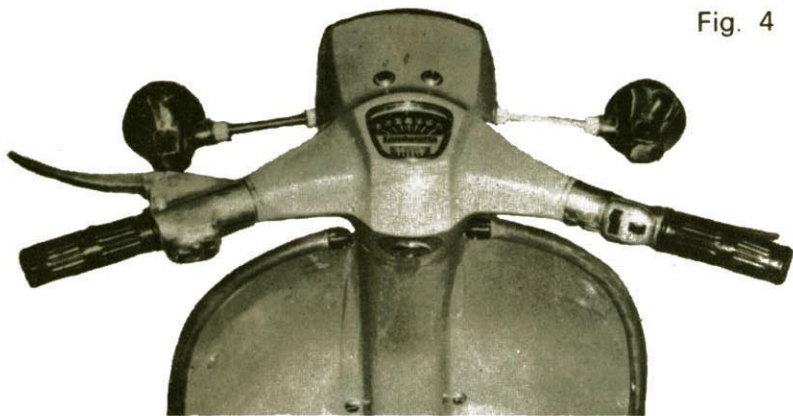
Two stroke, single cylinder. Forced air cooled.

Bore	..	66 mm
Stroke	..	58 mm
Capacity	..	198 cc
Compression ratio	..	7.3 : 1
Max. output at crankshaft	..	11.9 BHP at 6200 RPM
Lubrication	..	Petrol mixture
Starting	..	Kick-start pedal



# the key to better driving

Fig. 4



There is one for the steering lock fitted under the left hand arm of the handlebar, one for the Ignition (and electrical circuit) located at the middle of the handlebar

There is a key for the luggage compartment situated under the central front rib. The key of the steering lock operates this as well.

Each key has a number which coincides with its lock.

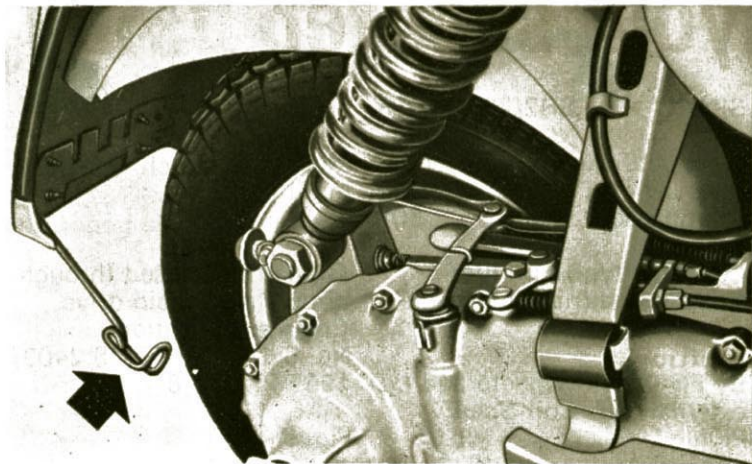
Ignition key has display of positions like OFF, 1, 2 etc In the position OFF engine can not be started.

—Start engine with key in position 1.

—Rotate the key further to have different lighting circuit ON.



Fig. 5



### **Steering Lock**

Turn the handlebar completely to left side and turn the key by half turn to lock the handlebar.

### **To Open**

Reverse operations.

### **Side Panels**

Side Panels are fixed by means of two retaining springs (Fig. 5).

To remove the Side Panels, lift the springs and move them away from the Side Panels.

To assemble, keep the panels on the frame, lift the retaining springs and move towards the panels and engage inner bottom border of the panel. [scooterhelp.com](http://scooterhelp.com)





# carburettor the heart of your scooter



SPACO SH2/22—P1015

Main Jet.....	123
Pilot Jet .....	45
Starting Jet .....	50

Cartridge type Air Filter  
fitted into air intake box

## Ignition

By Flywheel Magneto and  
external H.T. Coil-Spark  
Plug.

## Timing

$21^{\circ} \pm 1^{\circ}$  before T.D.C.  
(corresponds to  $2.43 \pm$   
 $0.23$  mm before Top Dead  
Centre)

Contact Breaker Point Gap  
—0.35 to 0.45 mm.

## Spark Plug

Approved types: Mico Bosch  
W 225 T2—Champion N4 —  
Marelli CW 240L

In tropical climate use spark  
Mico Bosch W 160 Z2—  
Forbes-CS.

Gap—0.5 to 0.6 mm.

## Clutch

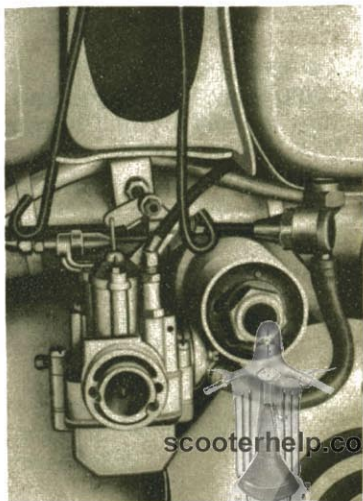
Multi-disc clutch immersed  
in oil bath.

## Transmission

Oil bath immersed through  
double row chain drive.

Chain specification:  
No. 6.1—DUPLEX IS:2403/  
1969 Pitch 3/8"

Fig. 6



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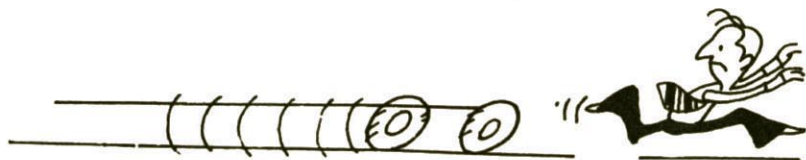
# geared to go



## Four speed constant mesh gear system in oil bath

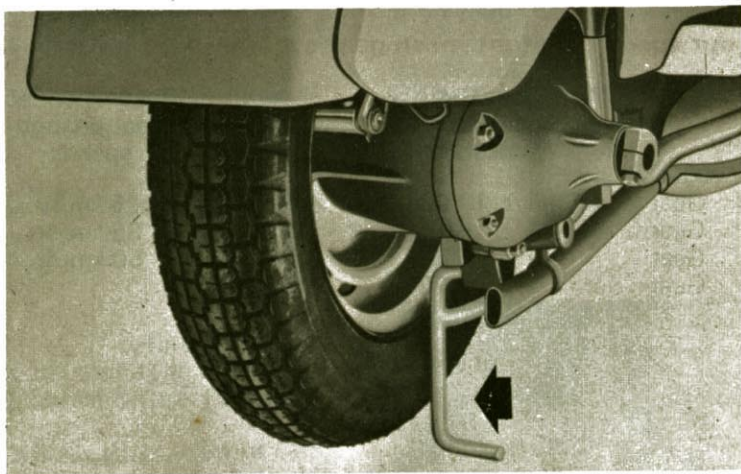
		Gear Ratio (Rearwheel to Crankshaft)	Gradient	Recommended Gear change speeds
I	Gear	1 : 13.05	40%	25 km/hr.
II	Gear	1 : 9.14	28%	35 km/hr.
III	Gear	1 : 6.20	18%	50 km/hr.
IV	Gear	1 : 5.22	11%	





# wheels

Fig. 7



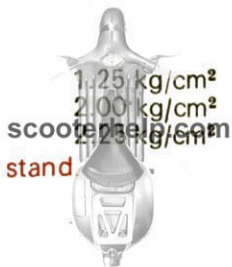
Wheels are interchangeable

**Tyres** 3.5 × 10 (4 Ply)

### Tyre Pressures

Front	18 PSI
Rear (Rider only)	28 PSI
Rear (with Pillion)	32 PSI

To dismantle wheels, lift the machine on its stand



### **To remove the Front Wheel**

- Unscrew the four dome nuts, attaching rim to drum.
- Unscrew the two nuts holding drum to trailing links.
- Slip wheel from the trailing links—taking care not to stretch or bend the front brake and speedometer drive cables.

### **To remove the Rear Wheel**

- Remove left side panel.
- Fit the rear wheel lift stand to the lug in the crank case (Fig. 7).
- Unscrew the four dome nuts and slip the wheel from drum.

**CAUTION: DO NOT UNSCREW THE OTHER FOUR NUTS, WHILE REMOVING EITHER WHEEL.**

### **To remove Tyre from Rims**

- Remove wheel.
- Ensure the tyre is fully deflated
- Unscrew four nuts holding the rims.

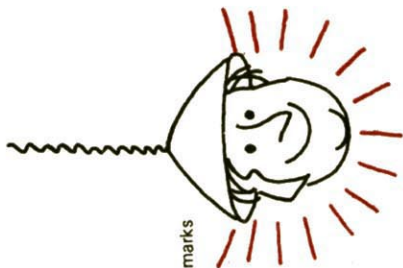


# Light up

## Position and Specification of Bulbs

Position	Application	No. off.	Characteristics	Type	Base	Circuit A	Circuit B	Circuit C	Circuit D	Remarks
Head Lamp	Dazzle and Anti-Dazzle	1	6V-25/25W 12V-35/35W	Spherical	BA20d	•	•	•	•	
Head Lamp	City/Parking Light	1	6V-5W 12V-6W	Festoon	S 8.5/9.5	•	•	•	•	
Speedometer	Speedometer Light	1	12V-2W (or 12V-2.5W)	Cylindrical	BA 9S	•	•	•	•	
Turn Signal Lamp	Turn Signal Light	4	6V-15W 6V-10W 12V-21W	Spherical	BA 15S	•	•	•	•	Recommended
Handle Bar Top Lamp	Pilot for Turn Signal Lamp	1	12V-2W (or 12V-2.5W)	Cylindrical	BA 7S	•	•	•	•	
Tail Lamp	No. Plate and Stop Light	1	6V-5/15W 12V-6/21W	Spherical	BAY 15d/19	•	•	•	•	
Handle Bar Top Lamp	Pilot for Hi Beam	1	12V-2W (or 12V-2.5W)	Cylindrical	BA 7S	•	•	•	•	

Note: Details of different circuits are given in pages 30 to 34. Particular circuit for your vehicle is stamped "For your Vehicle".



# Headlamp Adjustment

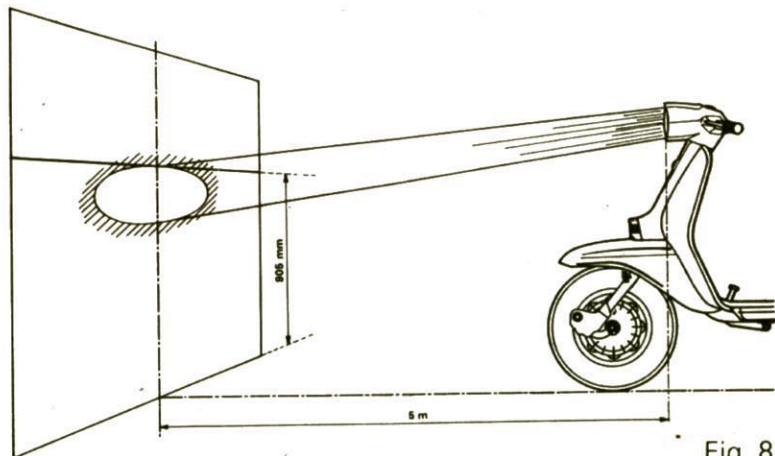


Fig. 8

Check tyre pressure.

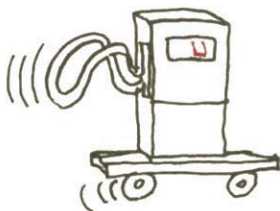
Place a vertical screen at right angles to the floor.

Put the scooter under normal load conditions.

Loosen or tighten the screw below the head lamp slowly until the upper edge of the zone illuminated by the dipped beam coincides with the horizontal line traced on the screen,

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# with a fuel tank

The cap of the fuel tank is located below the seat (Fig. 9)

To reach the cap:  
Unlock seat by pressing its rear; lift the seat; open the lid placed on the central frame rib (Fig. 10).

## Fuel tap

The fuel tap is located on the central rib towards the left under the saddle (Fig. 11).

It has 3 positions:—  
(1) closed (2) open  
(3) reserve.

Fig. 9

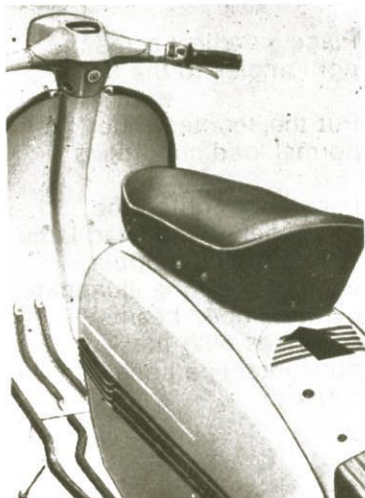
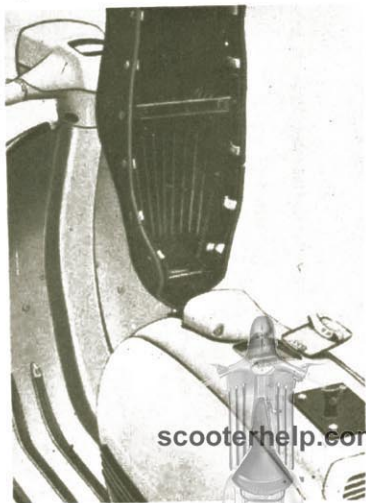


Fig. 10





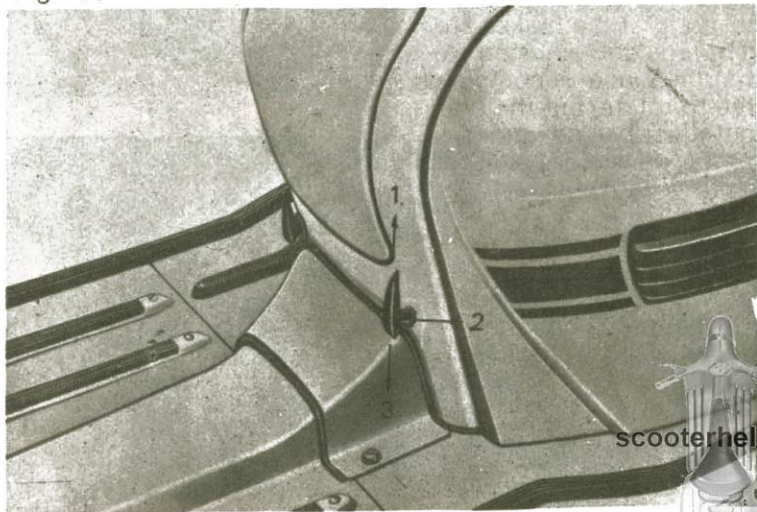
# you can go forever

Fuel supply is by gravity.

When the vehicle is stood up, it is recommended to keep the tap in closed position (Position 1—pointed end of tap up). While driving, the tap should be in

open position (Position 2—tap horizontal). When necessary, turn the tap to Position 3 for utilising 0.75 litre of reserve fuel (which is sufficient for driving another 19 kms approximately).

Fig. 11



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# brake it up !

Expanding type with cable control.

Front brake — Lever on RHS of the handlebar.

Rear brake — Control pedal on RHS of floor board.

Drums — In light alloy, with cooling fins (front) with cast iron brake drum inserts.

Ensure that the brakes are kept regularly adjusted, so that the wheel is completely free to rotate, but the braking effect begins immediately the lever (or pedal) is used.

Adjustment is made by means of two adjuster screws, using the special spanner provided in the tool kit (Figs. 12 & 13).



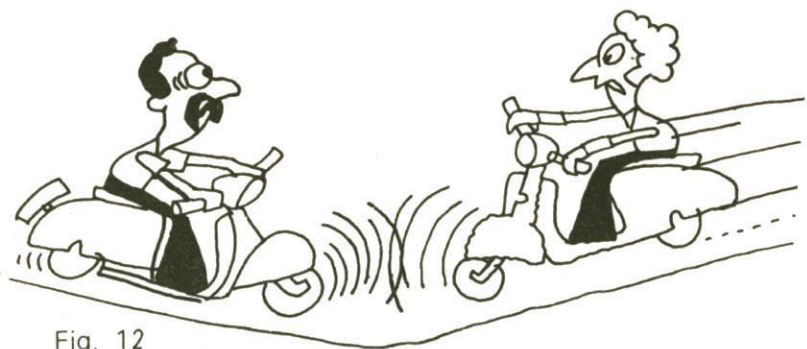


Fig. 12

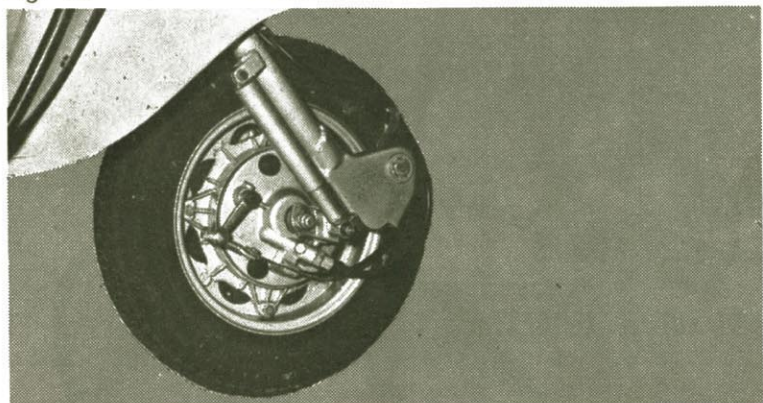
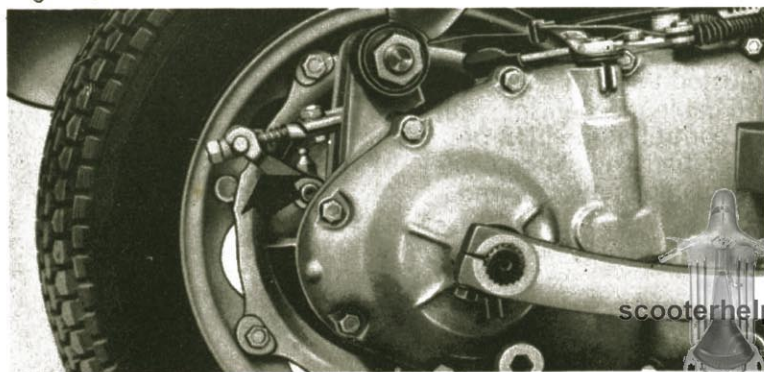


Fig 13

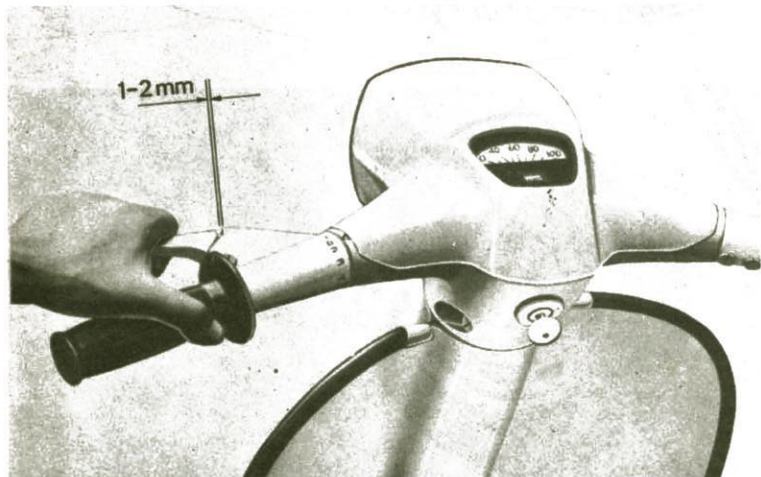


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# clutch

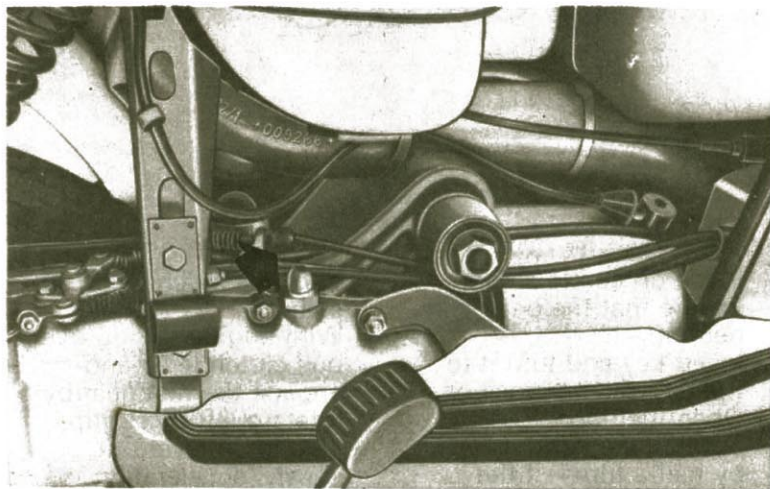
Fig. 14



Multiplate, oil-immersed, driving discs bonded with cork sheets. The clutch is adjusted through a lever and cable mechanism, with the control at the LHS of handlebar. The clutch cable is adjustable at lower end.



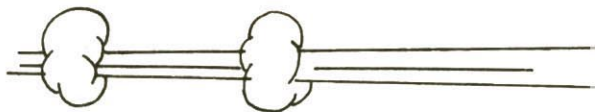
Fig. 15



Keep the clutch constantly adjusted, so that it begins to slip when the lever is in the position shown (Fig 14).

Adjustment is carried out by turning the adjuster as shown (Fig. 15). Use the same spanner as for brake adjustment.

# up ..up ..and away



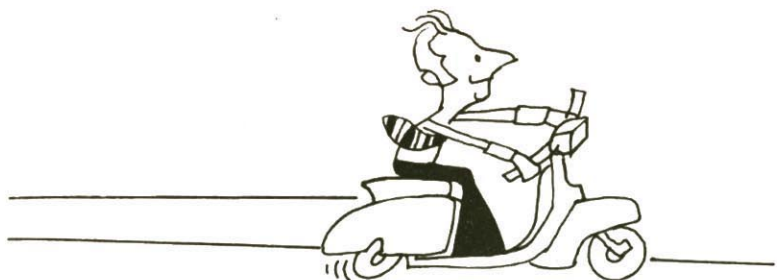
## To start

- Place on centre stand;
- Ensure that the gear is in neutral;
- Insert key and turn it to the day-driving position;
- Open fuel tap;
- Turn choke control lever by half a turn—if the engine is cold;
- Keeping throttle to minimum, kickstart the machine;
- As soon as engine is running, accelerate slightly to warm up;
- If the choke control lever has been used, return it to original position;
- During cold weather, run the engine a few minutes to warm up before using machine.

## To move off

- Take the machine off its stand;
- With engine ticking over, pull clutch lever and engage the first gear by rotating left twist grip;
- Let clutch lever out slowly, accelerating engine gradually, to maintain constant engine revolutions;
- Continue to accelerate until the correct speed to change to a higher gear is reached.





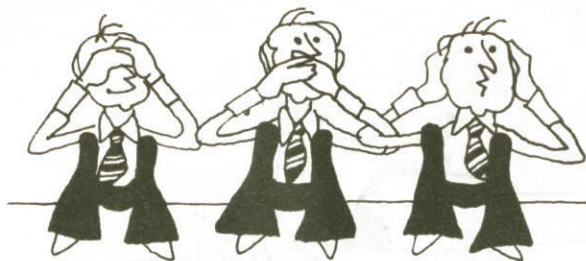
### **To change gear**

- Close throttle;
- Pull clutch lever;
- Engage next gear;
- Let clutch lever out, accelerating gradually at the same time.

### **To stop engine**

- Close throttle;
- Pull clutch lever;
- Put gear into neutral,
- Stop engine by turning the key of the switch to vertical position.





# dos and donts

## During the first 1500 kms.

DOs	DON'Ts															
<p>Use a mixture of 4% heavy duty engine oil—SAE 30—and petrol, during and after running-in period or SAE 40, 4% for first 1500 kms. and 2% afterwards.</p> <p>Check that carburettor is well secured on crank case, so that no air infiltration occurs.</p> <p>Change oil in the gear box at 750 kms.</p> <p>Check nuts and bolts for tightness between 500–700 kms.</p>	<p>Exceed the following speeds :</p> <table border="1"> <thead> <tr> <th></th> <th>I</th> <th>II</th> <th>III</th> <th>IV</th> </tr> <tr> <th></th> <th>Gear</th> <th>Gear</th> <th>Gear</th> <th>Gear</th> </tr> </thead> <tbody> <tr> <td>(km/h)</td> <td>25</td> <td>35</td> <td>50</td> <td>60</td> </tr> </tbody> </table> <p>Maintain even these speeds for uninterrupted long periods.</p> <p>Accelerate at full throttle.</p> <p>Overheat the engine.</p> <p>Climb hills at full throttle.</p>		I	II	III	IV		Gear	Gear	Gear	Gear	(km/h)	25	35	50	60
	I	II	III	IV												
	Gear	Gear	Gear	Gear												
(km/h)	25	35	50	60												



**Recommended Lubrication Prevents Massive Exhaustion**

# **lubrication diagram**

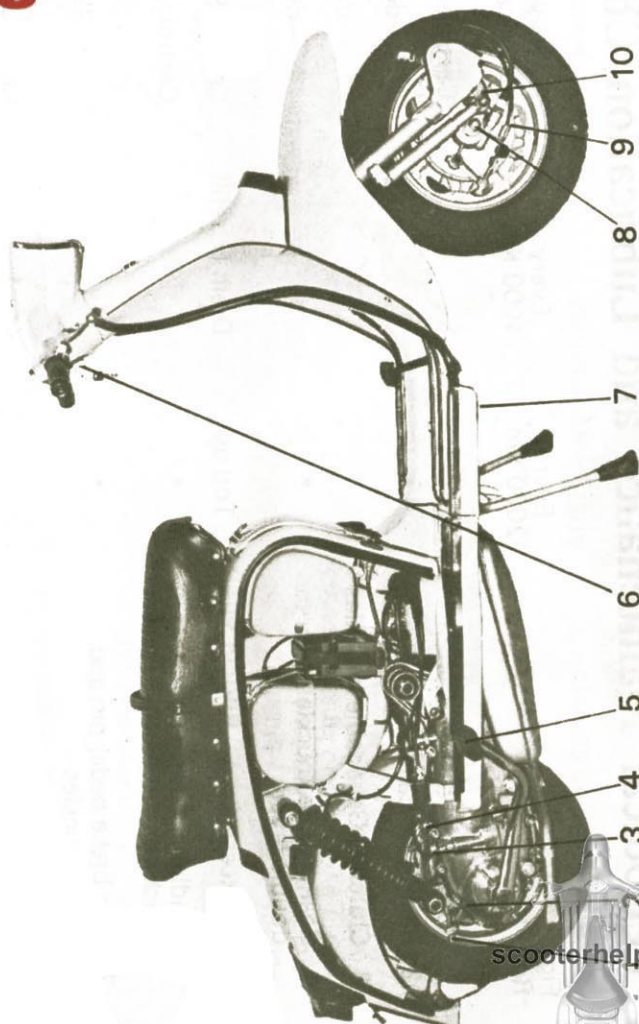


Fig 16





# Periodical Maintenance and Lubrication Chart

Fig.  
Ref.

	Every 2000 Km	Every 4000 Km	Grade of Lubrication
1	Rear brake cable knuckles *		Castrolase CL
2	Rear brake cam *		—do—
3	Clutch & Gear cable knuckles *		—do—
4	Gear change knuckles and double lever *		—do—
5	Crankcase	Top up	Castrol ST-90
6	Handlebar control levers and knuckles *	Drain & refill	Castrolase CL
7	Rear brake pedal pin and cable knuckles *		—do—
8	Front wheel bearings	*	Castrolase LM
9	Front brake knuckles *		Castrolase CL
10	Speedo drive and front Suspension knuckles	*	—do—



- Check brake adjustments \* —
  - Check spark plug, clean electrodes and adjust gap to 0.5-0.6 mm \* —
  - Clutch control: check and adjust \* —
  - Flywheel magneto Contact Breaker Point: clean and set gap between 0.35 and 0.45 mm —
  - Flywheel magneto cam oil pad—lubricate with drop of oil \* —
  - Air filter: clean by shaking and blowing with low pressure air for every 1,000 kms & change filter every 6,000 Km —
  - Decarbonising: cylinder, cylinder head, piston head and silencer \* —
- Castrol ST-90

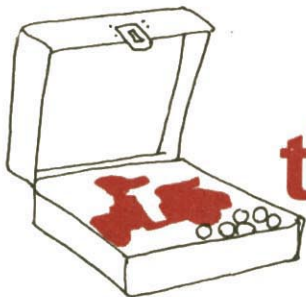
- Steering tube ball bearing After every overhaul Castrolase LM
- Front suspension springs After every overhaul Castrolase CL
- Top up



# equivalents for oils & grease

	CALTEX	ESSO	TIDE WATER	GULF	CASTROL	BURMAH SHELL
1.	SAE 30 Heavy Duty Engine Oil	RPM Motor Oil SAE 30 HD	Veodol Medium	Gulflube M. O. 30	Castrol XL 30	X-100 30
2.	SAE 40 Heavy Duty Engine Oil	RPM Motor Oil SAE-40 HD	Veodol Medium Hy. Veodol Adelbus 40	Gulflube M. O. 40	Castrol XL 40	X-100 40
3.	Chassis Grease	Marfak 0 Marfak 00	Veodol V. C. Grease	---	Castrollease CL	Retinax CD
4.	Gear Oil	Thuban 90	Veodol Trans-gear 90	Gulf Trans-mission Oil 90	Castrol ST 90	Dentax 90
5.	Multi-purpose Grease	Multifak 2	Veodol all purpose Grease H	Gulflex A (Multi-purpose)	Castrollease LM (All purpose)	Retinax A





# the lambretta mothballed

- Wash engine with petrol using a brush. Dry with clean rags.
- Wash painted and plastic parts with water using sponge.
- Dry with chamois leather. Do not use petrol or kerosene; otherwise damage will result.
- When washing with water jet, protect the air suction hose under the seat to avoid water entering suction box and filter cartridge.

## How to mothball your machine

(when not in use for some time)

- Wash and dry carefully as above.
- Drain all petrol from tank and carburettor.
- Clean tank and carburettor filters.
- Unscrew spark plug, insert a few drops of engine oil, rotate engine by hand two or three times to ensure a protective oil film on cylinder barrel. Replace spark plug.
- Coat with anti-rust grease all unplated parts.
- Lift machine off the ground by placing blocks carefully under frame so that tyres should not touch the floor. [scooterhelp.com](http://scooterhelp.com)
- Clean and deflate tyres.
- Cover machine.



# fault finding



## Engine fails to start or stops instantly

Irregular flow of fuel to the carburettor

Flooded carburettor

Clean fuel lines and filters  
Clean out jets

Close fuel tap—open throttle and endeavour to kickstart or unscrew and dry out spark plug. Replace plug and kickstart the engine

Get it replaced at our authorised service station

Damaged carburettor jet

## Ignition faults If current is reaching H.T. Lead

Dirty spark plug

Electrodes unadjusted or worn

Faulty spark plug

Unscrew and clean

Adjust to 0.5 ÷ 0.6 mm

Replace with new one

## If current is not reaching H.T. Lead

Contact Breaker Points faulty.  
Flywheel magneto or H.T.  
Coil circuits shorting

Take machine to [steetohelp.com](http://www.steetohelp.com) authorised service station



### **Engine knocking**

Incorrect Mixture

Replace with correct fuel mixture

Pre-ignition

Take machine to our authorised service station to adjust flywheel magneto timing

Excess Carbon Deposits

Decarbonize cylinder head

### **Engine misfires**

Irregular flow of fuel to the carburettor

Check and clean out fuel passages

Spark plug electrode gap too wide

Adjust to correct gap (0.5÷ 0.6 mm)

Dirty spark plug

Unscrew and clean spark plug

Contact Breaker Points dirty or not adjusted

Clean and adjust gap between points

### **Explosion in carburettor**

Pre-ignition due to overheating of spark plug

Change spark plug for one of a higher heat range

Carbon deposits on spark plug

Clean out spark plug

### **Loss of power or overheating**

Weak mixture

Adjust by closing slightly the carburettor air screw

Incorrect timing

Adjust timing. Take machine to our authorised service station

Exhaust port or silencer partially obstructed

Clean the port and silencer

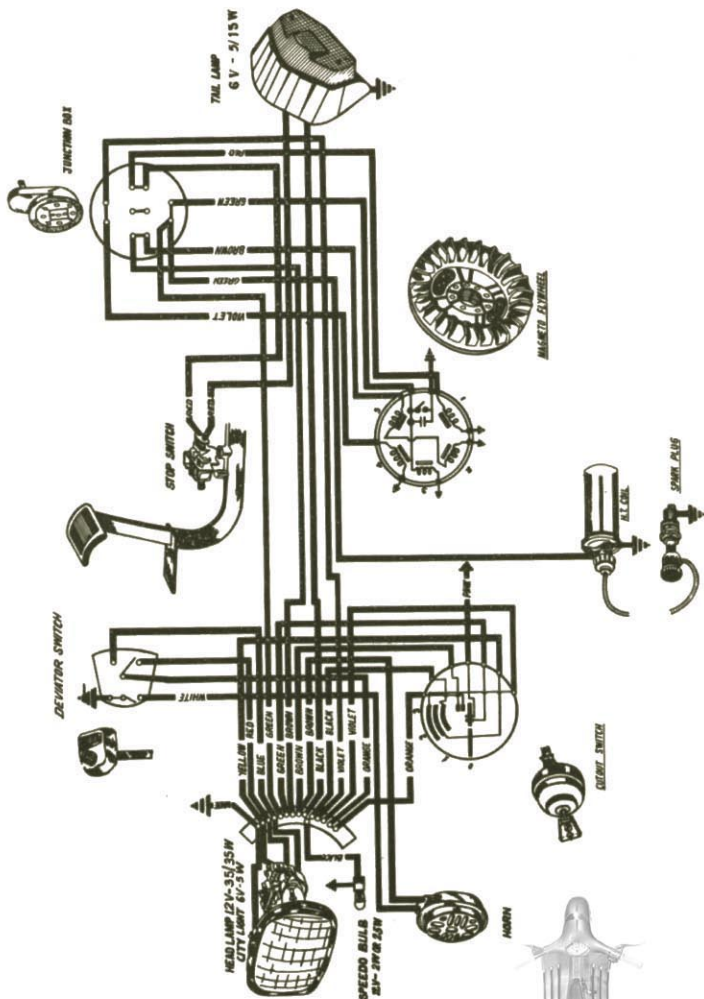
Cylinder head leakage

Tighten cylinder head nuts and replace gasket, if necessary



## WIRING DIAGRAM

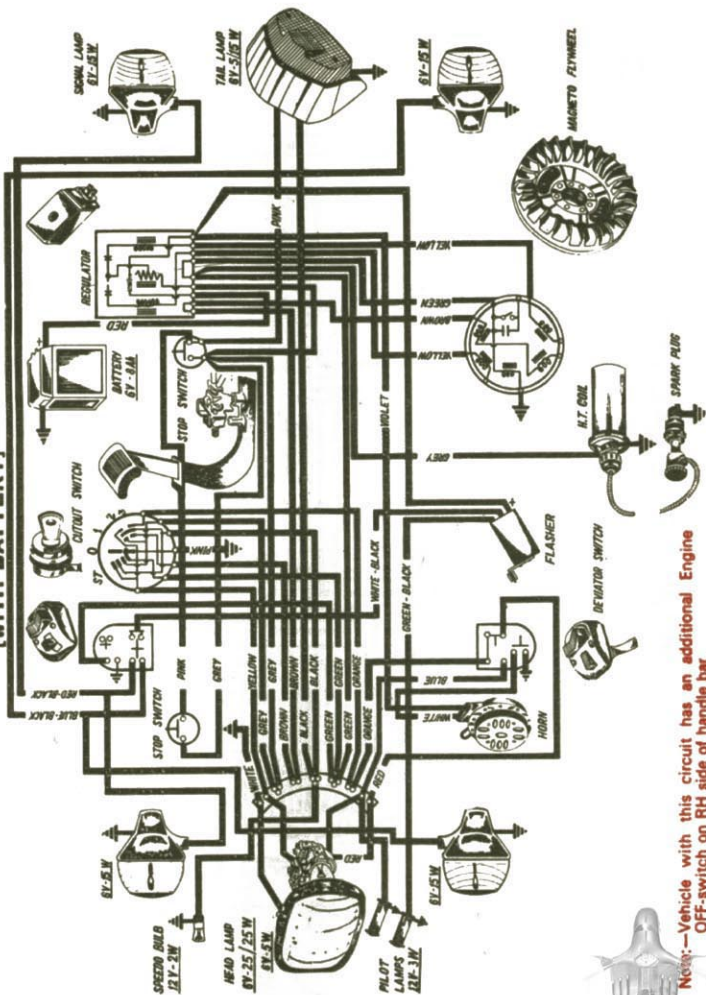
Circuit A



Circuit B

**Lambretta**

**WIRING DIAGRAM**  
[WITH BATTERY]



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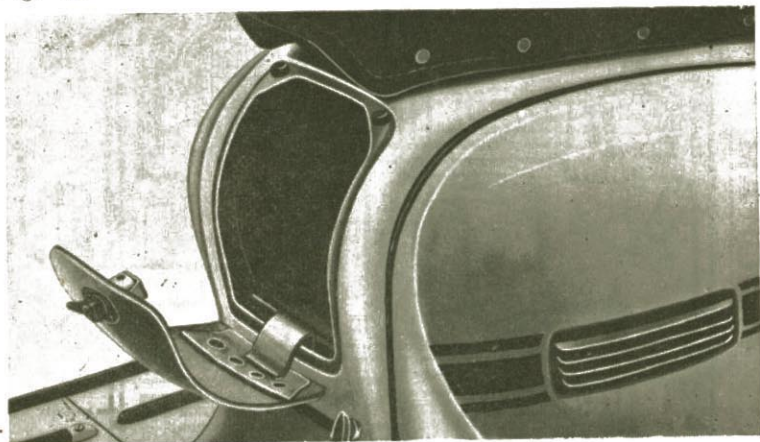
**Note:**—Vehicle with this circuit has an additional Engine  
OFF-switch on RH side of handle bar.





# tool box

Fig. 18



The tool box is fitted into the central frame rib under the front part of the seat.

In the luggage box, a tool kit is supplied consisting of—

- 1 Double-ended box spanner 21–13 mm for the spark plug and wheel nuts
- 1 Hexagon Allen Key (10 mm) for the plugs of crank case
- 1 Double-ended spanner 8–10 mm
- 1 Screwdriver
- 1 Rear wheel lifting stand

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Sarojini Nagar P. O., Lucknow-226008, India

Telex No. 033-267, Cable; Silcar



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Printed at Prakr... agers  
257-Golaganj, Lu... (India)